

5

Claims

1. A light phase modulator comprising a conducting part characterized by the fact that it is based on a multi-gate transistor, which if scaled in the submicron dimension is a gated-nanowire modulator.
10
2. Light phase modulator according to claim 1 characterized by the fact that is obtained from a SOI or a Si bulk.
- 15 3. Light phase modulator according to claim 1 or 2 forming a gate-all-around architecture.
4. Light phase modulator according to anyone of the previous claims characterized by the fact that it has a triangular, a rectangular, a polygonal, or an ovoid shape.
- 20 5. Light phase modulator according to anyone of the previous claims 1 to 3 characterized by the fact that it has a triangular, a rectangular or a polygonal form with rounded corners.
6. Light phase modulator according to anyone of the previous claims in which the
25 conductor part is doped polycrystalline Silicon.
7. Light phase modulator according to claim 3 or 4 or 5 forming a capacitive configuration.
8. Optical resonant cavity comprising a light phase modulator according to anyone of the
30 previous claims.

35